

Report From Agency

REPORT TO LEGISLATURE

NR 421 and 439, Wis. Adm. Code

Application of reasonably available control technology for volatile organic compound emissions from certain operations within the synthetic organic chemical manufacturing industry

Board Order Number AM-23-08
Clearinghouse Rule Number 08-114

BASIS AND PURPOSE OF THE PROPOSED RULE

Section 182(b)(2) of the federal Clean Air Act [42USC7511a(b)(2)] requires implementation of reasonably available control technology (RACT) for major VOC emission source categories in areas classified as moderate or worse for nonattainment of the ozone national ambient air quality standard (NAAQS). The U.S. Environmental Protection Agency (EPA) has published Control Techniques Guidelines (CTGs) for many of these VOC RACT categories, including reactor, distillation and air oxidation processes at synthetic organic chemical manufacturing industry (SOCMI) facilities. The DNR has promulgated rules to establish VOC RACT emission limits for most of these CTG VOC source categories – applicable in Wisconsin's moderate and worse ozone nonattainment areas.

However, on March 17, 2008, EPA notified DNR that Wisconsin's state implementation plan (SIP) was deficient because DNR had not yet promulgated VOC RACT emission limits that are consistent with several EPA CTGs in Wisconsin's ozone nonattainment areas. The SOCMI air oxidation, distillation and reactor operations comprise three of these CTG VOC source categories for which the DNR has yet to promulgate mandated RACT rules.

The EPA further notified the DNR that federal sanctions may be imposed in Wisconsin if the ozone SIP deficiencies identified in the March 17, 2008 letter are not fully rectified by mid-September, 2009. These potential federal sanctions include withholding of federal highway funds, and implementation of a federal air quality management plan in place of State rules.

In order to avoid these sanctions, the DNR is taking steps to remove these deficiencies from its ozone SIP. These steps include a proposed rule to establish VOC RACT requirements for air oxidation, distillation and reactor operations at applicable SOCMI facilities in Wisconsin's ozone nonattainment areas.

Summary of the proposed rule

The synthetic organic chemical manufacturing industry (SOCMI) refers to those facilities which produce man-made organic compounds that are created through industrial synthesis. Byproducts of these processes include VOC emissions that can be released to ambient air as precursors to ozone formation.

The proposed rule would require VOC RACT measures (recommended in EPA guidance) to effectively reduce VOC emissions from any applicable SOCMI facility's air oxidation or distillation and reactor operations in Wisconsin's ozone nonattainment areas. These control measures largely involve the destruction of VOC emissions by combustion devices such as boilers, incinerators or flares.

The US EPA has detailed the regulatory criteria that must be followed in developing, promulgating and enforcing VOC RACT rules for SOCMI facilities that have air oxidation, distillation or reactor operations in ozone nonattainment areas. These requirements are contained in the following two US EPA Control Technique Guideline (CTG) documents:

- "Control of Volatile Organic Compounds from Air Oxidation Processes in Synthetic Organic Chemical Manufacturing Industry" (EPA-450/3-84-015), Dec. 1984.

- "Control of Volatile Organic Compounds from Reactor Processes and Distillation Processes in the Synthetic Organic Chemical Manufacturing Industry" (EPA-450/3-91-031), Aug., 1993.

More recently, the US EPA has updated the New Source Performance Standards (NSPS), including VOC emission controls for SOCMI air oxidation, distillation and reactor operations. The Department recently adopted these NSPS requirements into ss. NR 440.675, 440.686 and 440.705, Wis. Adm. Code, respectively.

Many of the VOC RACT requirements for SOCMI facilities that are contained in the above-listed CTG documents are the same as those requirements listed in the NSPS for SOCMI operations. These similar requirements include control requirements, recommended control and recovery devices, monitoring and test methods, reporting and record keeping, equations to calculate emission rates and heating values, as well as many of the exemptions.

The CTGs and NSPS have essentially the same requirements for VOC controls for SOCMI facilities. Consequently, the Department has drafted its proposed VOC RACT rule (s. NR 421.07, Wis. Adm. Code) to reference appropriate portions of the promulgated NSPS SOCMI requirements (i.e., ss. NR 440.675, 440.686 and 440.705, Wis. Adm. Code).

SUMMARY OF PUBLIC COMMENTS

No comments on the proposed rules were received.

MODIFICATIONS MADE

No modification were made.

APPEARANCES AT THE PUBLIC HEARING

The Department held a public hearing on January 28, 2009 at the DNR Southeast Region Headquarters located at 2300 N Dr. Martin Luther King Jr. Drive in Milwaukee. There were no appearances at the hearing.

CHANGES TO RULE ANALYSIS AND FISCAL ESTIMATE

No changes were made to either the rule analysis or the fiscal estimate.

RESPONSE TO LEGISLATIVE COUNCIL RULES CLEARINGHOUSE REPORT

All comments received were accepted and the rule revised accordingly.

FINAL REGULATORY FLEXIBILITY ANALYSIS

The DNR does not believe that the proposed rule will have a significant economic impact on a substantial number of small businesses. Due to the 100 ton/year applicability threshold in the rule, it is highly unlikely that a small business, as defined under 227.114(1), Stats., would have a SOCMI operation that triggers the emission reduction requirements in the rule.